

Safety Data Sheet

#90028163 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
tert-Butyl chloride	507-20-0	(CH ₃) ₃ CCl	10	10 Sep 2026

SECTION 1

Identification

1.1 Product identifier

Product name tert-Butyl chloride

CAS number 507-20-0

EC / EINECS number 208-066-4

Chemical formula (CH₃)₃CCl

Molecular weight 92.57

SMILES CC(C)(C)Cl

1.2 Relevant identified uses of the substance or mixture and uses advised against

For research use, laboratory use, manufacture of chemicals only. Not for human or animal use

1.3 Details of the supplier of the safety data sheet

Molekula Limited
1 Millennium Way, Newton Aycliffe
Durham, DL5 6JW, United Kingdom
info@molekula.com · +44 (0) 3302 000333

1.4 Emergency telephone number

0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

2.1 Classification of the substance or mixture

Flam. Liq. 2; H225

2.2 Label elements



DANGER

CODE	HAZARD STATEMENT
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H225	Highly flammable liquid and vapour
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CODE	PRECAUTIONARY STATEMENT
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P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking
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P233	Keep container tightly closed
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P240	Ground/bond container and receiving equipment
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P280	Wear protective gloves/protective clothing/eye protection/face protection
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P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
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P403+P235	Store in a well-ventilated place. Keep cool
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2.3 Other hazards

Does not contain components considered to have endocrine-disrupting properties. Does not meet PBT or vPvB criteria under REACH Annex XIII.

SECTION 3

Composition / information on ingredients

3.1 Substances

Name	tert-Butyl chloride
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CAS number	507-20-0
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EC number	208-066-4
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Concentration / purity	c. 100% tert-Butyl chloride (CAS: 507-20-0): H225
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Classification according to Regulation (EC) No 1272/2008	Flam. Liq. 2; H225
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Hazard statements	H225
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Acute toxicity estimate (ATE)	No data available
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Impurities / stabilising additives	None
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SECTION 4

First-aid measures

4.1 Description of first aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. In case of persistent throat irritation or coughing: seek medical attention.
Skin contact	Wash with plenty of water. Continue to rinse for at least 15 minutes and seek medical attention.
Eye contact	Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.
Ingestion	After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel. First aiders/ medical personnel need to protect themselves.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5

Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Unsuitable extinguishing media	None known

5.2 Special hazards arising from the substance or mixture

Carbon oxides
Hydrogen chloride gas
Combustible.
Pay attention to flashback.
Vapors are heavier than air and may spread along floors.
Development of hazardous combustion gases or vapours possible in the event of fire.
Forms explosive mixtures with air at ambient temperatures

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6

Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. For personal protection, see section 8.

6.2 Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up

Absorb spillage with a suitable absorbent material.

6.4 Reference to other sections

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

7.1 Precautions for safe handling

Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs. Wash contaminated skin thoroughly after handling. Do not eat, drink or smoke when using this product. Remove contaminated clothing and launder thoroughly before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature 2 to 8 °C

Conditions for safe storage (incompatibilities) Storage class (TRGS 510): 3: Flammable liquids.
Hygroscopic. Store under inert gas.

7.3 Specific end use(s)

See Section 1.2.

SECTION 8

Exposure controls / personal protection

8.1 Control parameters

Occupational exposure limits (OEL / WEL) *Not applicable*

DNEC/PNEC data *Not applicable*

8.2 Exposure controls

Eye / face protection	Safety glasses Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.
Skin / hand protection	Recommended gloves: Viton rubber (fluor rubber), 0.7mm (480mins).
Respiratory protection	Full-face respirator Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.
Other protection	<i>No data available</i>
Environmental exposure controls	<i>No data available</i>

SECTION 9

Physical & chemical properties

9.1 Information on basic physical and chemical properties

Appearance / physical state	Liquid DERIVED FROM: LITERATURE
Colour	Colourless DERIVED FROM: LITERATURE
Odour	Odourless DERIVED FROM: LITERATURE
Melting / freezing point	-25°C DERIVED FROM: LITERATURE
Boiling point	51-52°C DERIVED FROM: LITERATURE
Flammability	<i>No data available</i>
Lower and upper explosion limit	<i>No data available</i>
Flash point	-27 °C DERIVED FROM: LITERATURE
Auto-ignition temperature	540°C DERIVED FROM: LITERATURE
Decomposition temperature	<i>No data available</i>
pH	<i>Not applicable</i>
Acidity	Neutral DERIVED FROM: LITERATURE
Kinematic viscosity	<i>No data available</i>
Solubility	Insoluble in water DERIVED FROM: LITERATURE
Partition coefficient n-octanol/water (log value)	2.45 DERIVED FROM: LITERATURE

Vapour pressure	Not applicable
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Density (g/mL)	0.851 g/mL DERIVED FROM: LITERATURE
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Relative vapour density	No data available
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Particle characteristics	No data available
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9.2 Other information

No data available

SECTION 10

Stability & reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under the prescribed storage conditions

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Avoid moisture. Excessive heat.

10.5 Incompatible materials

Strong oxidising agents. Strong bases (alkalis)

10.6 Hazardous decomposition products

See section 5

SECTION 11

Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (LD50 / LC50)	Information on hazard classes as defined in Regulation (EC) No 1272/2008 LD50 (Oral) - Rat - 2900 mg/kg Ref: External SDS
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Skin corrosion / irritation	Not classified
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Eye corrosion / irritation	Not classified
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Respiratory / skin sensitisation	Not classified
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Carcinogenicity	Not classified
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Mutagenicity	Not classified
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Reproductive toxicity	Not classified
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STOT (single / repeated exposure)	Not classified
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Aspiration hazard

Not classified

11.2 Information on other hazards

Not classified

SECTION 12

Ecological information

12.1 Toxicity

Not applicable

12.2 Persistence and degradability

Not applicable

12.3 Bioaccumulative potential

Not applicable

12.4 Mobility in soil

Not applicable

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Endocrine disrupting properties

See Section 11.2.

12.7 Other adverse effects

No data available

SECTION 13

Disposal considerations

13.1 Waste treatment methods

Not applicable

SECTION 14

Transport information

14.1 UN number or ID number

UN1127

14.2 UN proper shipping name

CHLOROBUTANES

14.3 Transport hazard class(es)

3



14.4 Packing group

II

14.5 Environmental hazards

Not a marine pollutant

14.6 Special precautions for user

Special precautions for user Handle in accordance with good industrial hygiene and safety practice

Transport category 2

Tunnel code (D/E)

Packing instruction (ADR) P001

Packing instruction (IMDG) P001

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15

Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Substance-specific regulations (e.g. licences) *No data available*

REACH code Y110

ECHA notification *Not applicable*

15.2 Chemical safety assessment

Not applicable

SECTION 16

Other information

Revision notes / other information

Previous SDS ver. 1 published 9th April 2019
Hazard classification and labelling according to Regulation (EC) 1272/2008
All eye/face protection should comply with EN ISO 16321-1:2022
Respiratory equipment: Reusable air-purifying respirator (APR)
Filter Type: ABEK
Standard: EN 14387
National Regulations:
-Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances
Other regulations, limitations and legal regulations:
-Directive 94/33/EC- The protection of young people at work

This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as "No data available" carry no recorded value; fields shown as "Not applicable" were assessed as not relevant to this substance. For queries, contact Molekula at info@molekula.com.